

WHAT IS CLAIMED IS:

1. A sheet processing apparatus, comprising:  
a sheet holding portion which stores plural  
supplied sheets with upstream edges in a conveying  
5 direction thereof aligned;

sheet stacking means for stacking the sheets  
discharged from the sheet holding portion; and

sheet conveying means for conveying the sheets  
discharged to the sheet stacking means, bringing the  
10 upstream edges of the sheets into abutment against a  
receiving stopper for receiving the upstream edges to  
align the upstream edges, and discharging the sheets  
from the sheet stacking means,

wherein the plural supplied sheets are  
15 discharged to the sheet stacking means from the sheet  
holding portion when a downstream edge in a conveying  
direction of a sheet to be supplied last has preceded  
the downstream edges in the conveying direction of  
the sheets stored in the sheet holding portion by a  
20 predetermined amount.

2. A sheet processing apparatus according to  
claim 1, further comprising sheet processing means  
for applying processing to the sheets stacked on the  
25 sheet stacking means,

wherein a subsequent sheet stored in the sheet  
holding portion and a preceding sheet stacked on the

sheet stacking means are conveyed together by the sheet conveying means in a state in which a downstream edge of the preceding sheet projects further than a downstream edge of the subsequent sheet by a predetermined amount and, after the preceding sheet has been discharged from the sheet stacking means, the subsequent sheet is stacked on the sheet stacking means.

10           3. A sheet processing apparatus according to claim 2, further comprising control means for controlling the number of sheets to be stored in the sheet holding portion according to a processing time of the sheet processing means.

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          4. An sheet processing apparatus according to claim 2, further comprising control means for performing:  
          a first action in a case in which the sheet is an ordinary sheet, the first action including subjecting a preceding sheet stacked on the sheet stacking means to processing with the sheet processing means and simultaneously causing a subsequent sheet to be held in the sheet holding portion and, after the processing of the preceding sheet ends, conveying the subsequent sheet and the preceding sheet together using the sheet conveying

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means to discharge the preceding sheet from the sheet stacking means, and then stacking the subsequent sheet on the sheet stacking means; and

5 a second action in a case in which the sheet is a specific sheet, the second action including not causing the specific sheet to be held in the sheet holding portion but causing the specific sheet to pass through the sheet holding portion to be stacked on the sheet stacking means, processing the sheet  
10 with the sheet processing means, and then discharging the sheet from the sheet stacking means with the sheet conveying means.

5. A sheet processing apparatus according to  
15 claim 4,

wherein the specific sheet is at least one selected from the group consisting of a sheet with a length equal to or larger than a predetermined length, a sheet for an overhead projector, a color printed  
20 sheet, a sheet designated as a top cover, a sheet designated as thick paper, a sheet designated as thin paper, and a sheet with a tab.

6. A sheet processing apparatus according to  
25 claim 2,

wherein the sheet processing means is a stapler for stitching a sheet stack.

7. A sheet processing apparatus according to  
claim 1,

wherein the sheet conveying means comprises a  
first rotary member and a second rotary member which  
5 rotate in contact with the sheets stacked on the  
sheet stacking means from both sides of the sheets.

8. A sheet processing apparatus according to  
claim 1,

10 wherein the sheet holding portion holds the  
supplied sheets linearly.

9. A sheet processing apparatus according to  
claim 1,

15 wherein the sheet holding portion comprises:  
moving means for moving the supplied sheets to an  
upstream side; and an abutment stopper against which  
the upstream edges of the sheets moved by the moving  
means are brought into abutment.

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10. A sheet processing apparatus according to  
claim 3 or 4,

wherein the sheet processing means is a stapler  
for stitching a sheet stack, and the control means  
25 increases the number of sheets, which are stored in  
the sheet holding means, in proportion to positions  
to be stitched by the stapler.

11. An image forming apparatus, comprising:  
image forming means which forms an image on a  
sheet; and

a sheet processing apparatus which applies  
5 processing to the sheet on which the image is formed  
by the image forming means,

wherein the sheet processing apparatus is a  
sheet processing apparatus according to any one of  
claims 1 to 9.

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12. An image forming apparatus, comprising:  
image forming means which forms an image on a  
sheet;

the sheet processing apparatus according to  
15 claim 2 which applies processing to the sheet on  
which the image is formed by the image forming means;  
and

control means for controlling the number of the  
sheets to be stored in the sheet holding portion  
20 according to a processing time of the sheet  
processing means.

13. An image forming apparatus, comprising:  
image forming means for forming an image on a  
25 sheet;

the sheet processing apparatus according to  
claim 2 which applies processing to the sheet on

which the image is formed by the mage forming means;  
and

control means for performing:

a first action in a case in which the  
5 sheet is an ordinary sheet, the first action  
including subjecting a preceding sheet stacked on the  
sheet stacking means to processing with the sheet  
processing means and simultaneously causing a  
subsequent sheet to be held in the sheet holding  
10 portion and, after the processing of the preceding  
sheet ends, conveying the subsequent sheet and the  
preceding sheet together using the sheet conveying  
means to discharge the preceding sheet from the sheet  
stacking means, and then stacking the subsequent  
15 sheet on the sheet stacking means; and

a second action in a case in which the  
sheet is a specific sheet, the second action  
including not causing the specific sheet to be held  
in the sheet holding portion but causing the specific  
20 sheet to pass through the sheet holding portion to be  
stacked on the sheet stacking means, processing the  
sheet with the sheet processing means, and then  
discharging the sheet from the sheet stacking means  
with the sheet conveying means.